KARELIA UNIVERSITY OF APPLIED SCIENCE
Programme in Design

Emma Ikonen

ETHICAL POINT OF VIEW IN DESIGN

Thesis
May 2013

CONTENTS

THESIS
MAY 2013
DEGREE PROGRAMME IN DESIGN
Sirkkalantie 12, 80110 Joensuu

Author

Emma Ikonen

Title

ETHICAL POINT OF VIEW IN DESIGN

Abstract

The purpose of the thesis was to study ethical problems in design, to know how to design according to ethical principles, and thus have a wide understanding of the concept. The aim was to put the gained knowledge into practise and design products according to the ethical design principles. The topic of the thesis was chosen because of the unethical phenomena in the field of design mostly due to striving for economic growth.

The problems and solutions were presented according to the stages of product life cycle from ecological, social and cultural points of view. Some companies that meet the criterion of ethical design were presented to show inspiring ethical practises. Products were made to show how to make ethical decisions in design process. They were made out of recycled and trash material to extend their life cycle.

The study suggests a new role for the designers; to take their responsibility in the society. The study helped to gain a wide understanding of the concept of ethical design and to design based on the ethical principles.

Language

English

Pages 39

Keywords
Design, ethical, sustainable, guide.

	**OPINNÄYTETYÖ** **TOUKOKUU 2013** **MUOTOILUN KOULUTUSOHJELMA** Sirkkalantie 12, 80110 Joensuu

Tekijä

Emma Ikonen

Nimeke

EETTINEN NÄKÖKULMA MUOTOILUSSA

Tiivistelmä

Opinnäytetyön tarkoitus oli tutkia muotoilun eettisiä ongelmia, oppia kuinka muotoilla eettisesti, ja siten saada syvä ymmärrys aiheesta. Pyrkimyksenä oli laittaa saatu tietoperusta käytäntöön ja suunnitella tuotteita eettisten periaatteiden perusteella. Opinnäytetyön aihe valittiin, koska muotoilualalla on paljon epäeettisiä ilmiöitä lähinnä taloudellisen kasvun tavoittelemisen takia.

Eettiset ongelmat ja ratkaisut esitettiin tuotteen elinkaaren mukaan ekologisesta, sosiaalisesta ja kulttuurisesta näkökulmasta katsottuna. Eettisen muotoilun kriteerit täyttäviä yrityksiä esitellään näyttääkseen eettisiä ratkaisuja muotoiluprosessissa. Tuotteet tehtiin kierrätetyistä ja roskiksesta löydetyistä materiaaleista niiden elinkaaren jatkamiseksi.

Opinnäytetyö ehdottaa muotoilijan roolin uudistamista, että muotoilija kantaisi vastuunsa yhteiskunnassa. Tutkielma auttoi ymmärtämään eettisen muotoilun konseptin laajasti ja muotoilemaan tuotteita eettisten periaatteiden mukaan.

Kieli	Sivumäärä 39
Englanti	

Avainsanat
Muotoilu, etiikka, kestävä, opas

1. INTRODUCTION

The aim of the thesis is to understand the concept of ethical design by gathering information about the subject. The goal is to show ways to design as ethically as possible. I will make products according to ethical principles. Some inspirational companies that meet the criteria of ethical design are presented to show ethical real life practises.

The topic is very current at the moment. The concern toward environmental issues arose several times during the 20th century. The final environmental awakening took place in the mid 1980es because of the pollution, loss of natural resources, global warming, deforestation and acid rains. The politics, media and advertising were talking a lot about the "green" issues. Also "green design" developed and became more known. (Niemelä 2010, 75)

Nowadays sustainability is a mega trend in many industries; environmental issues are widely discussed and companies are offering more and more environmentally friendly products. Green values are important for a company image, and companies have realised it. Still there are many unethical phenomena in the field that I would like to discuss in the thesis. I would also like to take into consideration the other aspects of ethical design in addition to green design: cultural and social that do not receive as much attention.

2. FRAMEWORK

The thesis is researching ethical problems in design, how to avoid unethical choices as a designer and how to make design from an ethical point of view instead. Ethical company cases and their products are presented to show ethical examples. The concrete result will be modified products that meet the criteria of an ethical piece of design. The vision of the end result is a comprehensive study of the topic and aesthetic, ethical products that bring new ideas to anyone who is interested in ethical choices in design.

Ethical is related to **moral principles**, the synonyms are moral, principled, right, fair, decent, just. Ethics are defined as "that branch of philosophy dealing with values relating to human conduct, with respect to the rightness and wrongness of certain actions and to the goodness and badness of the motives and ends of such actions." (Refence 2013) In 1940 Harol Van Doren defined industrial design as "the practice of analysing, creating, and developing products for mass-manufacture. The goal is to achieve forms which are assured of acceptance before extensive capital investment has been made, and which can be manufactured at a price permitting wide distribution and reasonable profits." (Van Doren 1940)

An established term for green or ecological design is **sustainable design** since the end of the 1990s. Other earlier used terms are **eco-friendly design, environmental design** and **eco-design.** The interest towards "green design" arose because of environmental problems in mid 1980es; pollution, loss of natural resources, global warming, deforestation and acid rains. The politics, media and advertising were talking a lot about the "green" so using the term *green* design was natural (Niemelä 2010, 75.) Nowadays green design and sustainable design have different meanings: green design is a process where the focus is on dealing with the individual environmental impacts, where as sustainable design deals with the whole product life cycle. Sustainable design is a whole design philosophy that also contributes to economic and social well being (Fuad-Luke 2004, 339.)

The focus of the study is put on industrial and product design but the principles of ethical design also apply from graphic design to architecture and to other creative processes. In the thesis I'm studying the problems from three different viewpoints; *Social, ecological* and

cultural. The impacts of design influence humans and their surroundings; nature and culture. I chose to examine the problems from this viewpoint since I consider taking care of social, environmental and cultural aspects to be an ethical issue. The main emphasis is put to the ethical features in order to present how to make design process ethical. Framework of ethical design is presented in Figure 1. Economic and technical aspects are considered but they are not viewpoints in the study, since they receive more attention already in the society.

Figure 1. The framework of ethical design. Source: White, Belletire & St. Pierre 2007).

3. STUDY IN ETHICAL PROBLEMS IN DESIGN

Designers have a chance to influence the supply, what kinds of products are offered to the customers, what materials are used, how they are manufactured, and by whom. Anttila (1992, 14) states that design should be responsible because it modifies and shapes its environment and therefore has a big influence. The choices made by the designer truly matter, and designer should make ethical decisions.

A key to understanding the ethicalness of a product is to consider the product's full life cycle; this involves studying all the stages the product goes through and its impacts on its surroundings. Here is an example from an ecological point of view: a disposable paper cup is generally considered to be greener than disposable plastic cup in that it uses renewable materials and less energy, thereby producing less waste and being biodegradable. However, paper requires cutting trees, transportation of trees to paper-mill, and both of these processes require a lot of energy. Paper processing causes air emissions, and chlorine and biological waste pollutes the water. Normally, paper cups end up on a landfill after the use where they decay and release methane. A paper cup has a plastic coating too, to prevent the hot liquid from dissolving the cup, so it is not completely biodegradable. A foam plastic cup made of petroleum has relatively small environmental discharges. It is difficult to tell whether paper cup or plastic cup is the more sustainable option. Cloth diapers are also considered to be more environmentally friendly when compared to disposable ones. However washing of cloth diapers requires plenty of water and electricity and thus creates more pollution. Which one is a better choice depends on how one considers water and air pollution to waste production and using a non-renewable resource. (Hendrickson, Lave, Matthews, Scott. 2006)

It's important to see the whole picture, the whole life cycle of a product. The life cycle is often long and complicated. It covers all the areas from the extraction of natural resources, through their design, manufacturing, assembly, marketing, distribution, sales and use until disposal as waste. Life Cycle Assessment (LCA) studies the environmental aspects and impacts throughout product's life cycle and can be used as a tool to evaluate the possible impacts. (Hendrickson 2006; European Commission 2013) The LCA analysis doesn't take the social and cultural aspects into consideration though. Different products have a high environmental impact in different stages of their life cycle. For example fabrics have strong

environmental impacts when they are dyed, printed and bleached. Their disposal is not problematic especially if they're made of natural fibres. Electronics again have a very high environmental impact during their use stage, because of their energy consumption. (European Commission 2013)

Drawing the line between ethical and unethical may be challenging. Ethics depend on a culture and the period of time, the current knowledge. Design field has a code of professional ethics but it's not widely taught in design schools or known among the designers. In the International Council of Societies of Industrial Design's (2013) Code of Professional Ethics the emphasis of the code is put to respecting and benefiting the client economically. According to my study I think the impact on the society and the environment should be at a high priority in the ethics. The values are normally set in the order of importance based on the gain received. An economical situation may have a higher importance than justice on a personal level. In that case it is about subject-centred perspective; the value always appears different according to the setter (Anttila 1992, 52)

The design problems are presented from **social, ecological** and **cultural** viewpoints in the thesis, since often only the economical and technical viewpoints are considered for maximum profit. The problems are linked; all ethical problems are basically also social since humans also suffer from ecological and cultural losses. The thesis studies all these different aspects that should be taken into consideration in the thesis process. The term **sustainable design** is mostly used for signifying eco-friendly design, but it actually it should cover social, cultural and technical aspects too.

I present the ethical design problems according to the five different stages of the product lifecycle from designer's point of view (Figure 2): design process, manufacturing, distribution, use and product's after life. These are the stages a designer should pay attention to in their work. All different stages of a product life cycle can be seen in Figure 3. I left out some of the stages of the product life cycle from the study, such as raw material extraction and sales, but some of their most crucial problems are discussed in other chapters if I think designer should influence them.

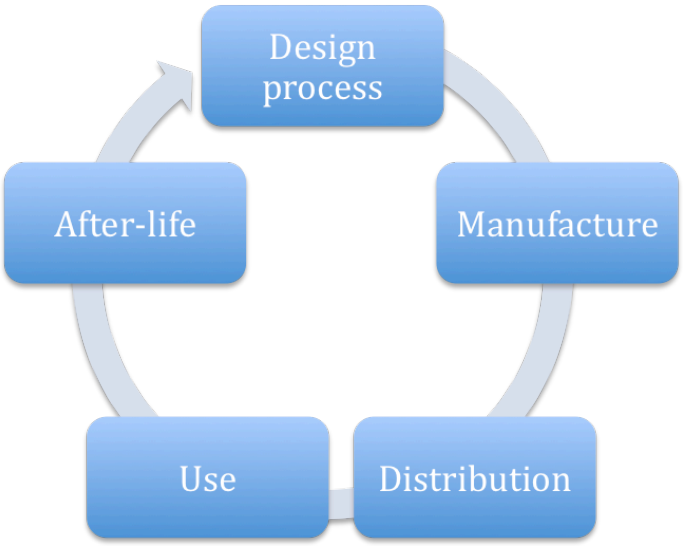


Figure 2. Product life cycle from designer's point of view.

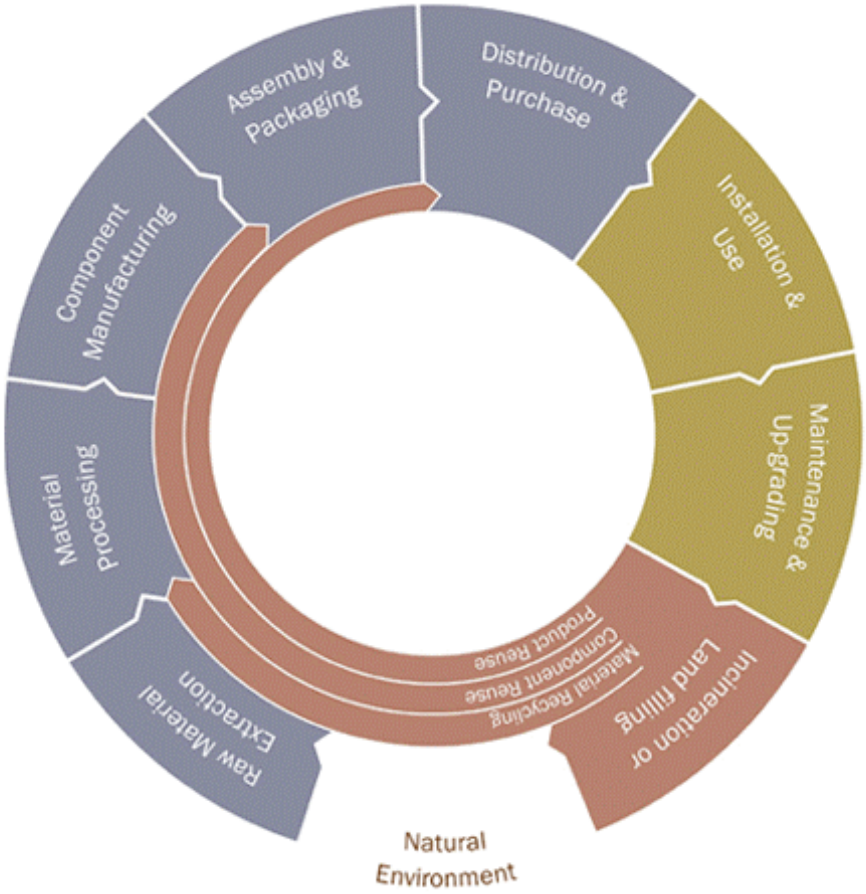


Figure 3. Full product life cycle. (White, Belletire, St. Pierre. 2007)

3.1 Design process

The design solutions have a great effect on the environment, people and product life cycle. Eighty percent of the environmental impact of the products, services and infrastructures around us is determined at the design stage. (Design Council, 2002. 19) However, changing common design procedures is difficult because designers face many conflicting objectives, uncertainties, and the industry demands speed and cost effectiveness. (Hendrickson, et al. 2010) Designers are often reluctant to understand the impacts of their actions. Designers are also lacking good project examples to teach them to work sustainably. (Margolin 1998, 89)

Products are often designed out of commercial interest instead of for an existing need. Design is expected to create economical gain for companies, no ethical or ecological gain. (Niemelä 2010, 59) The governments and companies are striving for growth. Design is mostly satisfying temporary needs and desires, where as people's true needs are often neglected. Unethical decisions are often made because of the urge for making profit. Some work offers are not ethical; the client company may be destroying the nature, not taking care of its employees, producing low-quality products or products that are ethically questionable, i.e. guns.

Classic furniture and items are often plagiarised for their popular appearance. The original designer doesn't get any profit for the sold furniture. It is cheaper not to put much effort on the research and development process and instead produce something that is already designed. Some products have a planned obsolescence incorporated into their design; in order to induce consumers to buy a new model of the product and this way create a continuous demand. Products can also often made obsolete by the changes in taste, changing the trends constantly to make people buy always a newer model. Also patenting can be a problem; a useful invention can be patented so that masses of people can't benefit out of it. The patenting process may take years when an invention might be actually needed before the process is finished. (Papanek 1970)

The design process may not pay attention to the telesis, defined as a "purposeful use of natural and social processes to obtain specific social goals." (Dictionary 2013) Therefore the item doesn't fit into the current socio-economic system or express the period of time (Papanek 1970, 32.) Forgetting and neglecting the traditions is a problem in

the globalising world where foreign products are imported and mass-production has replaced the crafts traditions. As a result craftsmanship skills are vanishing and part of the traditions, cultural history and identity are lost. (Slack 2006, 44)

3.2 Manufacture

Manufacturing processes can be very unethical, mostly from ecological or social point of view. The production methods and products can be un-ecological; many of the used lacquers, thinners and paints are harmful for the environment. Water systems, flora, fauna and also human health are detrimentally affected. Cheap, poor-quality materials are used because of their cheap material and production cost; examples include Medium Density Fibreboard (MDF) and particleboard. Their durability is weak and they are low in quality. They are rarely recycled or reused because of their features. These materials are commonly used in furniture production, and those pieces of furniture are not expected to last for long. They are not biodegradable so they end up as non-degradable waste. Limited natural resources are used without much consideration, renewable and non-renewable ones: some raw materials are running out. Raw material extraction has a big and visible impact on the nature. The manufacturing processes consume plenty of energy

The production of many companies is shifted to third world countries to save costs and maximise the profit. The working conditions in the factories or subcontractors' factories can be hazardous, with long working hours and low wages; workers' lives are threatened and their basic needs are not met. Also child-labour is a great problem with approximately 215 million children working around the world, many of them working full-time. (International Labour Organisation 2013) Working conditions in welfare countries can be stressful for the workers due to several reasons such as the demand for cost-effectiveness and speed.

3.3 Distribution

Transportation of the products is rarely ethical from ecological viewpoint. The amount of energy used for transportation is high when materials, components and final products are transported long distance. Due to globalisation and international trade products are distributed inter-continentally. Using road traffic and air traffic consumes particularly much fuel. Transportation requires roads to be built and transportation causes pollution, noise

pollution and loss of natural sceneries. The products can be inefficiently packed into the containers, so that all the space is not used. The packaging and wrapping of the items produces waste, and it is often not recycled.

3.4 Use

A household of four people produces 48 kilos of waste per month. During the same time business produces 4000 kilos of waste per one family. The household waste is not the major problem, but it is rather the industrial, economical waste. Therefore, changes in consuming habits should take place so that the un-ecological products wouldn't be bought. Recycling and composting the house hold waste doesn't make a big difference when considering the global waste problem, but it has an educational effect. (Ojala 2009, 13) Consumers decide what is produced by their purchasing habits, but designers have even greater responsibility about the products they design for industries.

There are many usability issues caused by inconsiderate design. The product can be difficult and uncomfortable to use. Product can require maintenance regularly and maintenance may not be easily available. Products can be risky for health. Planned obsolescence makes them break down after a certain period of time, which makes a consumer purchase another item. Also a product may not have proper instructions for usage and for disposal.

There are problems in use that designers are not directly responsible of; such as users washing in half empty machines or only one person driving a car without other passengers and thereby both consuming lots of energy. Products sometimes also lack proper user instructions.

3.5 Product after-life

What happens to a product after its useful life is maybe the most problematic one of the life cycle stages because if its long lasting impacts. Only 35% of the household waste was recycled in Europe in 2010. (European Environmental Agency 2013) It means around 65% ends up on landfills or is incinerated. Landfills take up space and may cause air, water and soil pollution, while incineration may result in emissions of dangerous air pollutants, unless

regulated properly (European Commision Eurostat 2013.) 260 million tons of plastic is produced every year. Almost one-third of that plastic goes into disposable, single-use items. Only about one percent of plastic is recycled globally (Earth 2013.) Most of the electronic waste is shipped into third world countries where locals separate them to earn some money. The work is hazardous and difficult (Biddle 2011.) The recycling and re-manufacturing also require plenty of energy in the western countries if the processes are not well planned.

The world is lacking a proper, widespread recycling system. Some recycled materials don't have a final use or final place of disposal figured out, such as glass in Finland. The companies that would like to use recycled materials often need large amounts of materials but the recycling systems are not well developed for the industry's needs; the quantities are too small and irregularly available.

4. ETHICAL SOLUTIONS

Designer can make ethical choices concerning the whole design process. Even though changing the norms in design is not easy the designer should strive for change; presenting ethical choices to a client. Manufactures can do this on the market and thereby influence all the stages of the design process. Also design education should teach the ethical processes so that the designer would grasp the ethical know-how. According to Fuad-Luke (2004, 15) designer should work in educating the client and the user about the ethical issues. Designers often are acting as "interpreters" in the group with other professionals. This is because they have understanding of different fields they work in, where as the many other specialists only know their own field. (Papanek 1970, 42) Designers have a good chance to influence their partners due to their role in the group. Based on the study ethical design meets the following criteria.

4.1 Ethical design process

Papanek (1970, 12, 162) suggests the role of a designer to be renewed "so that a designer won't submit to be used as a tool for the industry, but as to act as a defender of the consumers. Design should be a tool for designers to take part in changing the society." Designers should learn to take their responsibility because they are influencing their environment by their actions. Design should break away from its identity created by the culture of consumption and to rethink their role and position in the world. (Niemelä 2010, 59)

The basic principle is considering the necessity of the items produced; products should be designed for an actual need, something that is necessary and useful. The need is not created by the market forces and industry but comes from customers' basic needs. Design should be a tool for problem solving, such as those for the disabled or poor, or then for environmental problems. The design process should start by addressing a need. Co-operation with professionals from different fields, with colleagues, clients, manufacturers and users is essential. Direct and open communication between the parties, sharing of knowledge and experiences helps to create a satisfying end result.

Designers have a chance to influence on the material selection. Choosing low-impact materials here meaning non-toxic, sustainably produced, renewable, recycled or recyclable materials that require little energy to process is essential. Designers should be responsible to plan the reuse for their product to avoid waste generation. (El Haggar 2007, 18.) The product is not planned for obsoleteness; to stop functioning after certain period of time to create a continuous demand. Minimizing the use of materials is a high priority since it means a lower impact on the environment. There are eco-design checklists available to check if the planned design process is sustainable. (Brezet, et al. 1997, 77) There should also be similar checklists also covering the social and cultural aspects; ethical design checklists.

The product is designed to have socio-cultural durability, to have a classic outlook that endures time. The item is not designed based on a current trend to stay fashionable only for a short period of time. Construction has to be durable and long lasting. One important criterion for an ethical product is that the product idea is not plagiarised; the appearance of the product is not imitating another existing product to profit from another designer's idea.

No-design concept doesn't mean the opposite of design but it's rather and ethical goal. The basis is a moderate consumption, usability and pragmatism. A designer breaks away from prejudices and generally accepted principles in the design process. The outcome doesn't rely on a brand; thus the product itself must be outstanding. The related no-brand philosophy means not using logos or designers' names that would add into the price (Stenroos 2005, 45.) Slow design philosophy emphasises the designer, the artisan and the end user to derive pleasure of design process or the end result. Slow design uses local materials, collected and put together in a socially and environmentally responsible way. It emphasizes thoughtful, methodical, slow creation and consumption. Slow design is a counteraction against the pressure for speed and cost-effectiveness. (Fuad-Luke 2008, 3)

In the design process attention should also be paid to the telesis. "A telesis of an item should exemplify the period of time and conditions that have created it and should fit into the current socio-economic system." (Papanek 1970, 32) Designs should take local or regional culture into account both as a source of inspiration and as an important consideration for the design outcome. They should encourage a diverse skill base and keep up and respect the old traditions, also by re-launching old, decorative methods. (Slack 2006, 44)

4.2 Ethical manufacture

The amount of packaging is reduced to a minimum, and the material used for packaging should be as ecological as possible. The manufacturing processes need to be kept to a minimum, thereby using less energy. Resources, materials and energy are used sparingly. Renewable energy should be the main source of energy: solar, wind, hydro, wave or geothermal energy. The production of waste needs to be minimized. Ideally, products would be made of natural materials or non-toxic, non-harmful synthetic materials that have no negative effects on the natural environment and that can be reused continuously without losing their quality.

The Cradle-to-Cradle concept made by Braungart and McDonough (2002) strives for the elimination of the concept of waste. They propose a shift from cradle-to-grave system where waste is brought to landfill to cradle-to-cradle approach where waste can be used as a material for other products. Products are designed to be made of materials that can be safely manufactured, used and reused and still maintain their high quality through their life-cycle. The use of the concept convinces to protecting the environment from waste generation. Also industries benefit from the continuous availability of high value material (El Haggar 2007, 18.) Figure 4 compares the current situation with the 3R's Concept (Reduce, Reuse, Recycle) and Cradle-to-Cradle concept. Figure 5 shows the cycle according to the Cradle-to-Cradle concept.

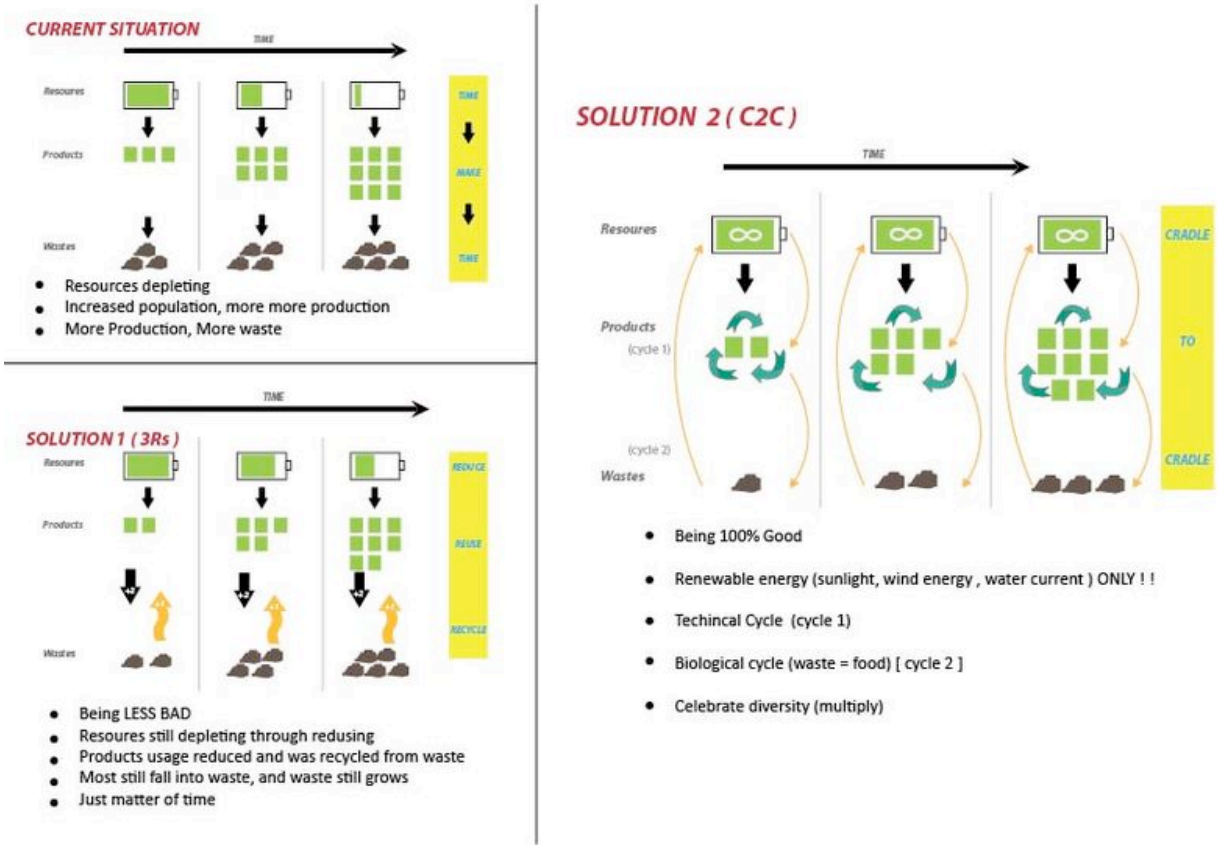


Figure 4. Cradle-to-Cradle concept comparison with other systems. Source: Wikihelp, 2013

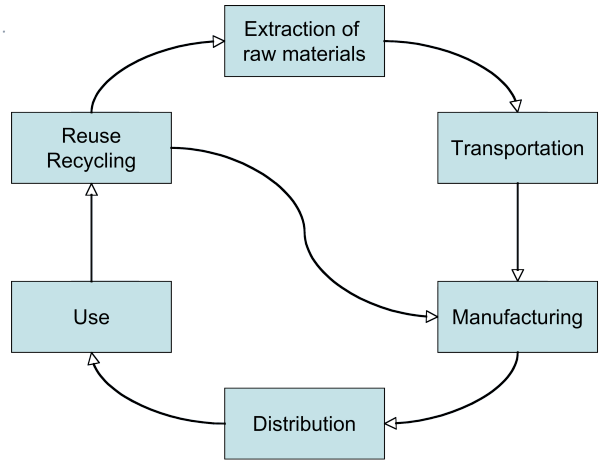


Figure 5. Cradle-to-cradle life cycle

The working conditions are good for the maker providing safe and healthy working environment. The worker receives proper payment for their work, enough for living costs. Working hours are according to the country's legislation. No child labour is used in any

stage of the product life cycle. The old crafts traditions are kept up; a traditional diverse skill base is maintained in the production processes and old traditional methods are relaunched. (Slack 2006, 44)

4.3 Ethical distribution

The use of energy for transportation should be low, both in transporting raw materials to the manufacturer and transporting the product from the manufacturer to the retailer. Locally sold products have much lower transport energies. The products transported by sea or rail have a lower impact than those transported by air or road. Environmental impact can be reduced by minimizing packaging and wrapping, flat packing and reducing air space in packaging and containers. The wrapping should be reused or recycled. The logistics should be efficiently planned.

4.4 Ethical use

Usability is the most important criteria from user's perspective. The product is pleasant and easy to use; the operation can be learned by observing the object. The product meets the needs of the user. Designers affect product properties that make the product pleasing to use. The user is able to take care of the product by themselves. There is no need for maintenance or the maintenance is easy to get. The product can be easily maintained and repaired if needed. The structure is modular, so new parts can be changed with ease. The design of the product isn't based on a current trend, so it is doesn't go out of fashion, but remains modern. Anti-obsolescence means the product is not made obsolete with changes in technology or taste (Fuad-Luke 2004, 324.) Designers should also come up with innovative ways to instruct users to use the products in a sustainable manner.

4.5 Ethical product after life

After its useful life product is reused; re-manufactured, re-furbished or the materials are recycled. Preferably, all parts of the product are being reused to prevent waste. The re-manufacturing processes are simple, less energy consuming. The incineration process should be clean. The products made of renewable, biodegradable materials can be also decomposed.

Little energy is used for the upcycling or recycling process. **Upcycling** means converting waste materials or useless products into new materials or products of better quality or for better environmental value. The manufactures need relatively large amounts of recycled materials continuously, so the products should be designed to be recycled and remanufactured systematically.

Product take-back means a manufacture agrees to take back their product when it has reached the end of its life so that the components and/or materials can be reused or recycled. (Fuad-Luke 2004, 328) In some European countries and in Japan an increasing number of products, especially electronics, are subject to "take-back" laws, under which the companies are responsible for ensuring that their products or packaging are taken back or even collected from consumers and recycled at the end of the products' useful lives. This "extended producer responsibility" reduces waste disposal, relieves the burden on municipalities handling a growing volume of waste and makes companies and manufactures take responsibility of their actions. (Palmer & Walls 2002, 1) At least 28 countries currently have laws designed to encourage reduced packaging and greater recycling of packaging discards. (U.S Environmental protection agency 2013) Germany was the first country to present a product take-back law in 1993. Their law has prompted also other European and U.S. companies and industries to reduce packaging and start designing products with disassembly and recycling in mind. Companies have noticed they can lower costs and increase revenues by making green products or introducing green processes. (Hendrickson, et al. 1990)

4.6 Certification and standardization

There are different certificates and standards for different products and purposes, for industries and organisations. A company or an organisation can apply for a certification or a standard to get tools to ensure e.g. product's or factory's safety, reliability, good quality or environmental sustainability. There are numerous organisations offering certifications and standards for preventing social and environmental problems. The changed procedures help to improve the corporate image of the company, workers' conditions or to save costs with energy and material consumption, transportation and waste management. (ISO 2013) A certified product often receives a label, a logo, as a proof for met requirements. The

organisations also audit the clients for continuous ethical performance. Certified natural resources, such as forests, guide companies and designers to choose the materials wisely.

- International Organization for Standardization (ISO) creates different specifications for products and services helping the industry to be more effective. **ISO 14000** certificates help environmental management; they provide practical tools for companies and organizations to identify and control their environmental impact and improve their environmental performance. They have standards for environmental management systems, life cycle analysis, communication and auditing. **ISO 26000** is a tool for social responsibility. It provides guidance for businesses and organisations to operate in a socially sustainable manner by acting in an ethical and transparent way and thus striving for a healthy society. (ISO 2013)

- Planet positive offers business, building, product and supply chain certifications. (Planet Positive, 2013)

- Scientific Certification Systems, Inc. (SCS Global Services) offers environmental, sustainability and food quality certification, auditing, testing and standards development. They have several tools for more sustainable products: Green Product Certification, Environmental Product Declaration, Environmentally Preferable Product, Life Cycle Assessment and Recycled Content Certification. (SCS 2013)

- *Energy Star* is a U.S. Environmental Protection Agency (EPA) program that provides labels for energy efficient products. (Energy Star 2013)

- *A Carbon Footprint* of a company can be calculated and certified by many organisations, like Carbon Trust, BSI, or Carbon Footprint™.

- Fair Trade Labelling (FLO) offers labels of secured rights of marginalized producers and workers in developing countries. (FLO 2013)

- Social Accountability International (SAI) works to advance human rights of workers around the world. They have created a leading certificate for labour welfare: **SA8000® standard for decent work**. (SAI 2013)

- Fair Labor Association (FLA) has a standard, Code of Conduct, for companies to take care of their labour's rights. (Fair Labour Association 2013)

4.7 Ethical case examples

Some companies and organisations have a special philosophy and goal, they are designing for an existing need or targeted problem. They are against social injustice, environmental problems and loss of cultural tradition. These companies design products that have ethical features and can be used as an example and inspiration for others.

SmartUs. Children play three hours per week where as in 1997 they played 11 hours. Obesity, aggression and depression are common problems among children. (Gray 2011, 1) SmartUs playground responds to these challenges. SmartUs is a learning and activity concept playground for children and families by Lappset (Picture 1-2). It combines modern technology with traditional playground elements and thus offers new, different physical and learning activities. The players learn physical and motor skills and creativity. In addition to ready games also creating own games is possible. The games can be played in groups and individually. The concept was developed in cooperation with experts from different fields; design, fitness, education and technology. (SmartUs 2013)

Picture 1. SmartUs interactive playground. Source: Lappset 2013.

Picture 2. SmartUs interactive playgrounds. Source: Parkequip 2013.

SmartUs encourages people to run, jump, discover, compete for fun, and together enjoy the sensations attained from achieving success. At the same time SmartUs enhances the outdoor gaming culture by utilising the technological and media interests of children. SmartUs playgrounds can be found all over Western Europe, beginning in 2006. The playground consists of iStation central unit, iPost info columns, iGrid jump grids and sensors using rfid-tags. (Hienonen 2007, 20)

Lappset company's main product are more traditional playgrounds. As with SmartUs, the other Lappset playgrounds are designed based on scientific research. The playground equipment is made of modular elements. Their colours and shapes are designed to attract children to play. The products are made durable and to survive rough use. The outlook is made to be timeless. The equipment are produced according to the latest safety standards to make playing as safe as possible. (Vihma 2008, 28; Lappset 2013)

Tikau is a Finnish label of handicrafts. The word *tikau* means durable or long lasting in Hindi. The company employs and empowers the artisans of rural India by offering work with handicrafts. The women are able to work at home or in their home village. The aim is to preserve the handicrafts tradition that has been passed on for generations and to preserve the chance to practice handicrafts as a source of livelihood. The company acts according to Fair Trade principles.

The materials are hand processed and designed to be sustainable in terms of the environment, quality and aesthetics. Ecological values are the main consideration in materials: local environmentally-friendly raw materials include bamboo, organic cotton, non-dyed wool, banana fibre, cashmere and recycled sari fabrics. Most of the products are non-dyed or naturally dyed and the hand-made processes minimize energy consumption. The designs are

made to suit Nordic taste. (Tikau, 2013) Some of their product range is presented in Picture 3.

Picture 3. Tikau products. Source: Tikau 2013.

Japanese company **MUJI** offers simple, minimalistic products with reasonable prices by making best use of materials. The name MUJI comes from *Mujirushi Ryōhin*, translated as *No Brand Quality Goods.* The no-brand philosophy means not using logos or designers' names that would add into the price. Some of the products are designed by top designers but aren't marketed using their names. The product range consists of basic and necessary items. (Stenroos 2005, 45)

The company uses the most suitable raw materials and avoids wasting any unused materials. The manufacturing processes are streamlined. The packaging is simple and reduced into minimum. The products are placed in uniform, plain containers that highlight products' natural colours and shapes. Only functional product information and a price tag are displayed. The shopping experience in MUJI is user-friendly: pleasant and relaxing because of the harmonic, simplistic stores without information overflow (Picture 4.) (MUJI 2013.)

Picture 4. MUJI store

Butterfly Works is a Dutch co-creation studio. They aim to decrease poverty and increase equality and prosperity in the developing countries by creative design and innovative learning programs (Fuad-Luke, 2008. 7.) They have two departments; the Design & Branding team co-creates inspiring products and concepts and accesses global markets and trade networks to establish successful brands, the Social Campaigns & Learning team co-creates innovative learning programs and social awareness campaigns.

The projects start with a clearly defined social need. They harness local knowledge, creativity and expertise to achieve effective and lasting solutions. The Tyre Trade is a project in Morocco where baskets are made of old car tyres. The baskets were originally intended for the local market in Southern Morocco. When Butterfly Works saw them during a trip in Morocco, they became inspired to collaborate with local craftsmen to develop new shapes that were suitable for the Dutch market. Butterfly Works bought the baskets and sold them to some design stores. Soon many brands wanted to sell them, and now they are widely available in Europe. The profit goes to supporting the makers. (Butterfly Works 2013.)

Picture 5. Tyre Trade basket.

Lino Codato investigates new materials for contemporary furniture. The company uses water hyacinth and Yan Lipao (Fern Vine) that have become weed and invasive in watercourses in southern United States and other areas. When these plants are harvested, prepared and tried they become great weaving material. The Fern Vine is used traditionally in Thailand, and skilled artisans are still available for furniture production. Their furniture are presented in Pictures 6 and 7. This furniture supports use of local materials and traditional craft skill base. (Fuad-Luke 2004, 38)

Picture 6. Lino Conato chairs.

Picture 7. Lino Codato sofa for indoor and outdoor use.

5 THE PRODUCTS

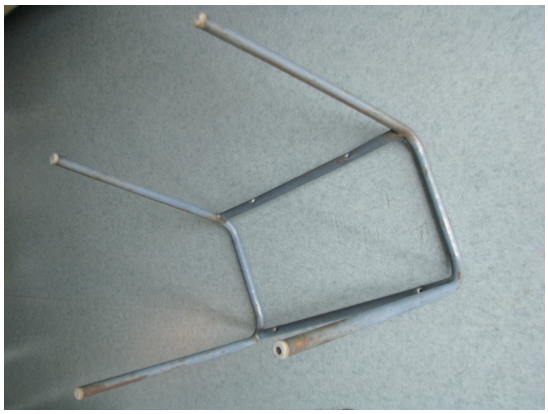
The goal of the products is to make ethical choices based on ethical principles. The idea is to show opportunities in the old, trash furniture and products. By easy modification the items can have a new life. I see the future of design as not creating of new items, but modifying, recycling and making the new out of the old. This should be applied on a larger scale also in mass production.

I wanted to use materials that are problematic, those that are often thrown away. Disposal of some materials is problematic; there are plenty of MDF, particleboard and plastic furniture in landfills. The materials are cheap, but the final products are not often long lasting or fixable. They are not very good for reuse either; the problem is with the quality, structure and appearance. It has to be covered with something. How should one process it to make it appealing, durable and long lasting? There is also plastic available, but it is not good for my purposes. Normal users cannot modify plastic; this is more so for companies to do (Plastic-wood composite, etc.). Metal normally needs special machines for processing, but small modifications can be made even at home.

The style of the products is modern, Scandinavian. The upcycled products often have "a recycled look" that does not suit all tastes. These products are often bought by environmentally friendly people, and the bohemian style matches with their taste. I try to make the products not to look too recycled, to match with many tastes and other design styles instead. Upcycled design should be for all different buyer groups.

5.1 A magazine holder

The idea is to create a container, a magazine holder, made of chair metal frame and fabric "bag" attached to it, to hold magazines, toys, laundry, shoes, et cetera. Plenty of chairs with metal frames are discarded to landfill. A chair (Picture 8-9) and a stool (Picture 10-11) were found in the trash. I found the structure of the stool frame nicer for this purpose so I decided to start to develop it. The chair frame can be used later. I removed the sitting part of the stool and twisted the legs straight. The metal frame was a bit rusty so I sanded it lightly to remove the flaking rust. I didn't take it all the rust off since I thought little rustiness would give it more character, an industrial look.

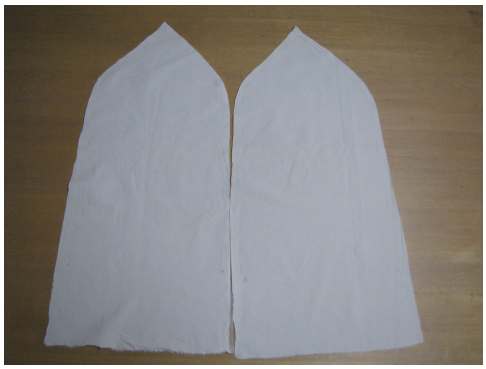



Pictures 8-9. Experiments with the chair.


Picture 10-11. Structure of the stool.

Making the fabric bag out of recycled materials was an obvious choice. The manufacture process of fabrics strains the environment by cultivation of cotton and harmful dyes. Therefore it's ethical to use recycled cotton or at least organic cotton instead. The fabric was found thrown away at recycling centre's "take for free corner." I chose a white coloured fabric to highlight and contrast the structure, and to add some softness. I decided to make the fabric bag out of eight pieces sewn together (Picture 12) to form inner and outer part to hide

the seams. The idea was to fold the fabric over the “edges” and to attach it with stitching (Picture 13) but I realised it wasn’t necessary since the bag sits well without it.



Picture 12. The form of the fabric pieces.

Picture 13. The fabric attached to the structure.

I added a pocket for holding small items, bills, toys or clothespins (Picture 14.) The bag can be easily washed in the laundry and changed into a new one to match the interior.

Picture 14. The ready product.

5.2 A lamp

An old lamp was found in a recycling centre (Picture 15.) It had a non-grounded plug, so it couldn't be used in modern wall plugs and therefore it was useless. The wooden structure of the lamp was of good quality and the design was interesting so I thought to modify it to extend its life cycle. The paint of the wood was worn out, scratched and yellowish (Picture 17.) The lampshade was grimy, outdated and badly sewed (Image 16.)

Picture 15. The starting point of the lamp.

Picture 16. The original lampshade.

Picture 17. The structure

The non-grounded plug was changed into a modern one. I decided to sand off the paint to bring out the beautiful wooden colour. I left some traces of the white paint to make the surface look interesting. With the paint on one could assume the material to be plastic. I also sanded off the white paint from the upper metal part to reveal the rough metal surface because I thought the grey metal shade would look good with light colour wood. The golden colour metal part in the middle didn't match with the grey upper metal part so I painted it with silver enamel paint. Now the colours match. The modifications can be seen in Picture 18 with a big light bulb. The lamp can be used without a lampshade with a big light bulb to bring out the whole structure.

Picture 18. A modified lamp with a big light bulb.

The fabric of the lampshade was outdated and bad quality so I removed it and made new patterns based on the old shade. The new lampshade was sewn out of four different pieces. I chose gossamer as a fabric that is used for several purposes in households, often for cleaning. It was an old, used one and now received new use. The frame of the lampshade had to be fixed: I removed the round metal plate from blocking the light and re-attached the metal strings that had detached (Picture 19.)

Picture 19. The frame of the lampshade.

Picture 20. The new lampshade out of gossamer fabric.

The lamp stand can be used two different ways for different outlooks; either with the lampshade on (Picture 21) or with only a large light bulb. I chose an incandescent light bulb because of its simple outlook to be used without the lampshade. Also because the energy saving lamps, compact fluorescent light bulbs, are not necessarily better compared to incandescent ones. Their production requires more energy and their disposal is difficult because of their mercury content. Also studies show the broken bulbs can be harmful for health and their UV radiation level is high (LiveScience 2013)

Image 21. The final product.

5.3 Evaluation of the results

I made a magazine holder and modified a lamp as an example of ethical products. The idea was to continue their useful life according to the earlier presented cradle-to-cradle concept, reusing all of the possible material, so that only minimum amount would go to waste. By reusing old materials existing natural resources are saved. This is should be applied in a wide scale since there is plenty of material to upcycle.

The materials used in the project were all recycled, also no paints or tools were bought but old, existing ones were used. The aim for the products was to fill the ethical criteria presented before. I would say I did according to the ethical principles. I had to throw away the worn-out sitting part of the chair I experimented with, but it was because there is no recycling for plastic. Also the enamel paint used for the lamp metal parts wasn't ecologically

friendly, but only a small amount was used. As an independent designer and for a small project some of the problems didn't apply as they do for a big manufacturer. The aim was to continue products' life cycle, make them usable and to endure time. I would say I succeeded in my goals. The products can still continue their life cycle; the magazine holder can still be transformed back to a stool, and the lamp can have a new paint or a lampshade if needed.

5. CONCLUSIONS

The purpose of the thesis was to understand what is ethical design and to show ways to design ethically. I think I accomplished the goal; I understood the concept of ethical design in a profound way, and got to present ethical ways to design things. The thesis was beneficial because the ethics of a designer are not discussed enough. Also studying the subject provided me with a lot of new tools to work as a designer. Now I have a clear picture of how to make things ethically.

There are no studies or literature available about ethical design considering all different aspects so pieces of information had to be collected from various sources. It is important to have theses and research about the subject that take all the different aspects into consideration, since normally only ecological aspect of design is discussed. The topic was very broad and it wasn't easy to divide it clearly, to analyze and perceive it. The amount of information was almost an overwhelming once I started reading the online articles from the sustainability specialists. There are literature, articles and magazines available particularly about sustainable design, but ethical design problems from social and cultural view points were not so easy to find. There were loads of articles online from the professionals of sustainable design, but the approach was very technical and difficult to grasp at times. Also basically all ethical problems and criteria in books and magazines were presented in lists, so combining the information into a flowing text was particularly challenging.

The topic is very current at the moment with all different ethical problems rising due to risen consumption. The project was very interesting to me because of its importance and the impact designers can make. The ethical values in all are very important to me and now I feel even stronger about them. I know these principles will guide me professionally in the future and in my every day actions. I wish to influence other people too, to spread the awareness.

Niemelä's statement "Design should break away from its identity created by the culture of consumption and to rethink their role and position in the world" (2010, 59) sums up my way of thinking. Designers can have a great impact on their environment and also on the other professionals they co-operate with. I see the future of design as not creating of new items, but modifying, recycling and making new out of old. This should be applied in a larger scale

also in mass production. In addition to the environment, attention should be paid to the social and cultural aspects, so that the outcome would be equitable for anyone in contact with the product life cycle and respectful and conservative for the local culture and crafts traditions.

REFERENCES

Anttila, P. 2009. Käsityön ja muotoilun teoreettiset perusteet. Keuruu: WSOY

Assaudian, E. 2010. State of the World 2010. Massachusetts: Worldwatch Institute.

Bradley, S. 2010. Are you an ethical designer? http://www.vanseodesign.com/web-design/ethical-designer/ 13.3.2013

Braungart, M. & Mc Donough, W. Cradle to cradle.

Braungart, M. & Mc Donough, W. 2003. The Hannover Principles: Design for Sustainability Tenth Anniversary Edition

Butterfly Works, 2013. http://www.butterflyworks.org/content/9611/tyre_trade , http://vimeo.com/butterflyworks 12.1.2013

Desing Council, 2002. Annual Review. London: Design Council.

El Haggar, 2007 Sustainable Industrial Design and Waste Management: Cradle-to-Cradle for Sustainable development. Elsevier Science.

Energy Star, 2013. http://www.energystar.gov/index.cfm?c=products.pr_how_earn

European Commission Eurostat, 2013. http://ec.europa.eu/environment/ipp/integratedpp.htm http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Waste_statistic 5.5.2013

European Commission, Nature. 2013. http://ec.europa.eu/environment/ecolabel/the-ecolabel-scheme.html 15.5.2013

European Environment Agency, 2013. http://www.eea.europa.eu/pressroom/newsreleases/highest-recycling-rates-in-austria 2.5.2013

Fair Labor Association, 2013. http://www.fairlabor.org/our-work 10.5.2013

Fair Trade International, 2013. http://www.fairtrade.net/standards.html 10.5.2013

Fuad-Luke, A. 2004. Eco Design Handbook. London: Thames & Hudson.

Fuad-Luke, A. 2008. Slow Design Principles.

Gray, P. 4/2011. American Journal of Play. http://www.journalofplay.org/sites/www.journalofplay.org/files/pdf-articles/3-4-article-gray-decline-of-play.pdf%20 2.1.2013

Hendrickson, C., Lave, L., Matthews, H., Scott. 2006. Environmental Life Cycle Assessment of Goods and Services –An out-put Approach. Washington: Resources for the Future.

Hendrickson, C., Conway-Schempf, N., Matthews, H. Scott. 2010. Green design educational modules and case studies. Pittsburgh: Carnegie Mellon University.

Hendrickson, C., Conway-Schempf, N., Lave, L., McMchael, F. 1990. Introduction to Green Design. Pittsburgh: Carnegie Mellon University.

International Council of Societies of Industrial Design, 2013. http://www.icsid.org/resources/professional_practice/articles1165.htm 2.5.2013

Hienonen, K. 2007. Suomalaisen designin uudet mielentilat. Keuruu: Otava.

Lappset, 2013. http://www.lappset.com/global/en/Company_navigation/Lappset_company/Design,_Environment,_Safety 10.11.2012

Live Science, 2013. http://www.livescience.com/25999-cfl-uv-radiation-skin.html 10.5.2013

Margolin, V. 1998. Design for the Sustainable World.

MUJI. 2013. http://www.muji.eu/pages/about.asp?PT=1 10.11.2012

Niemelä, M. 2010. Kestävää muotoilua mallintamassa. Jyväskylä: Bookwell Oy

Ojala, K. 2009. Irti tavarasta. Keuruu: Otava

Palmer, K., Walls, M. 2002. Economic Analysis of the Extended Producer Responsibility Movement: Understanding Costs, Effectiveness, and the Role for Policy.

Papanek, V. 1970. Design for the real world. Helsinki: Yhteiskirjapaino.

Reference, 2013. www.reference.com. 1.2.2013

Slack, L, 2006. What is product design. Mies: RotoVision SA.

Stenroos, A. 2005. Design Revoluutio. Lahti: Gummerus

Strauss, C. F., Fuad-Luke, A. 2008. Slow design principles.

Ted's Talk, 2011. Mike Biddle: We can Recycle Plastic. http://www.ted.com/playlists/28/sustainability_by_design.html 19.4.2013

Thackara, J. 2005. Massachusetts: Massachusetts Institute of technology.

Tikau, 2013. http://tikau.com/about.php?lang=fi 19.4.2013

U.S Environmental protection agency. 2013. http://www.epa.gov/epawaste/conserve/tools/stewardship/products/packaging.htm 10.5.2013

Van Doren, H, 1940. Industrial Design. New York: McGraw Hill.

Vihma, S. 2008. Suomalainen muotoilu, käsityöstä muotoiluun, Porvoo: WS Bookwell Ltd.

Vihma, S. 2008 Suomalainen muotoilu, kohti kestäviä valintoja. Porvoo: WS Bookwell Ltd.

LIST OF IMAGES

Figure 3. White, P., Belletire, S. & St. Pierre, L. 2007. Learning Ecological Design. Okala, Phoenix, AZ, USA. http://wikihelp.autodesk.com/Alias/enu/Community/Sustainable_Design/030Environmental_performance_and_sustainable_design. 29.5.2013.

Figure 5. https://upload.wikimedia.org/wikipedia/commons/a/ae/Cradle-to-cradle_approach.png 12.4.2013

Picture 1. Lappset, 2013. http://testwww1.lappset.fi/loader.aspx?id=a0674364-4514-4962-89c8-984de80077ab 10.11.2013

Picture 2. Parkequip, 2013. http://www.parkequip.com.au/images/smartusimages.png 10.11.2013

Picture 3. http://3.bp.blogspot.com/_5L76L6FpCGM/TUg6dKFQd-I/AAAAAAAABa8/kxjavPlavGA/s1600/store_4.jpg 10.2.2013

Picture 4. http://djhuppatz.blogspot.fi/2011/05/ikea-vs-muji.html 10.2.2013

Picture 5. Butterfly Works, 2013. http://www.butterflyworks.org/content/9611/tyre_trade 10.2.2013

Picture 6. Architonic, 2013. http://www.architonic.com/pmsht/bunson-lchc/2012314 11.5.2013

Picture 7. Italian Design 360, 2013. www.italiandesign360.com 2.5.2013